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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/519,551	03/06/2000	Jozeph W. Triepels	PHN 17, 326	8962

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EXAMINER

ABDULSELAM, ABBAS I

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/519,551

Applicant(s)

TRIEPELS ET AL.

Examiner

Abbas I Abdulsalam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Arguments

1. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobi et al. (USPN 5868582) in view of Fjelstad et al. (USPN 5802699).

Regarding claim 1, Jacobi et al teach a contact device for electrically connecting a printed circuit board (7) with a flat panel (4) which itself may be in the form of another printed circuit board (7) or, in the form of a liquid crystal display (LCD), through a, connector module (1) of approximately U-shaped cross-section holding the edge (5) of the panel (4) between the legs of the U. Jacobi et al teach that the panel has a plurality of contact pads on its edge, and the upper leg (2) has openings (11) through which the linearly arrayed contact elements (6) extend into the area of the contact pads on the LCD panel. See col. 2, lines 34-54. Jacobi et al teach allowing the LCD panel to be at an angle of several degrees to the printed circuit board as well as improving the conductivity for electrical signals (col. 2, lines 53-56). Jacobi does not teach the use of a laminar substrate with opposite sides with electrically conducting patterns.

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Fjelstad on the other teaches a generally planar substrate 21 having a top surface 23 with a first connector 24 disposed thereon and an oppositely facing bottom surface 25 with a second connector 26 on the bottom surface. Substrate 21 in this arrangement is a multi-layer laminated circuit panel with numerous electrical leads 28 (col. 9, lines 54-61 and Fig. 1 (21, 28)). Fjelstad teaches the substrate having electrically conductive leads and means defining at least one mounting surface, with holes open to the mounting surface extending inwardly therefrom toward the substrate. See col. 7, lines 45-52.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Jacobi's contact device shown in Fig 1 to incorporate Fjelstad's a multi-laminar substrate (21) as shown in Fig. 1. Because a multi-laminar substrate helps make up a mounting assembly for mounting and connecting a substrate having electrically conductive leads as taught by Fjelstad.

In addition, it would have been obvious to one skilled in the art that contact at the edges of the display panel excludes the pixels and hence meets the desired feature of "proximate to the pixels".

Regarding claims 2-3 and 7, Fjelstad teaches conductive equipotential plane member 137 that may be formed from a conductive material such as copper or other metal (col. 14, lines 33-41).

Regarding claims 4-5 and 8, Fjelstad teaches interconnecting a connector 24 with the substrate, and indicates that a conductive material may be carried on a generally laminar interposer (col. 11, lines 53-63).

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Regarding claim 6, Fjelstad teaches using flexible spring-like elements connected between a chip and a substrate (col. 3, lines 19-24).

3. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobi et al. in view of Fjelstad and in further view of Okamoto et al. (USPN 6563554).

Jacobi as modified has been discussed above. However, Jacobi does not teach two substrates and an electro-optical material between the two substrates. Okamoto et al. on the other hand teach the liquid crystal layer (1) sandwiched by the two substrates such that the one of the optical design of the liquid crystal layer (1) includes the one that can attain electro-optical characteristics. See col. 3, 19-25

Therefore, it would have been obvious to one of ordinary skill in the art to further modify Jacobi's display system of Fig. 1 to incorporate Okamoto's use of two substrates between which the liquid crystal layer is sandwiched. Because the use of two substrates helps make up an LCD device as taught by Okamoto.

Regarding claim 10, Jacobi teaches the use of a liquid crystal display or other flat panel (4). See the abstract. Okamoto teaches the use of EL (Electroluminescence) elements. See col. 1, line 21.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abbas I Abdulsalam whose telephone number is (571) 272-7685. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

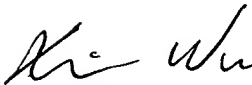
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Abbas Abdulsalam

Examiner

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March 20, 2005


XIAO WU
PRIMARY EXAMINER